

VAS TOGGLE BASED ON DEVICE ORIENTATION

FIELD OF THE DISCLOSURE

[0001] The present technology relates to consumer goods and, more particularly, to methods, systems, products, features, services, and other elements directed to voice-assisted control of media playback systems or some aspect thereof.

BACKGROUND

[0002] Options for accessing and listening to digital audio in an out-loud setting were limited until in 2002, when SONOS, Inc. began development of a new type of playback system. Sonos then filed one of its first patent applications in 2003, entitled “Method for Synchronizing Audio Playback between Multiple Networked Devices,” and began offering its first media playback systems for sale in 2005. The Sonos Wireless Home Sound System enables people to experience music from many sources via one or more networked playback devices. Through a software control application installed on a controller (e.g., smartphone, tablet, computer, voice input device), one can play what she wants in any room having a networked playback device. Media content (e.g., songs, podcasts, video sound) can be streamed to playback devices such that each room with a playback device can play back corresponding different media content. In addition, rooms can be grouped together for synchronous playback of the same media content, and/or the same media content can be heard in all rooms synchronously.

BRIEF DESCRIPTION OF THE DRAWINGS

[0003] Features, aspects, and advantages of the presently disclosed technology may be better understood with regard to the following description, appended claims, and accompanying drawings where:

[0004] Features, aspects, and advantages of the presently disclosed technology may be better understood with regard to the following description, appended claims, and accompanying drawings, as listed below. A person skilled in the relevant art will understand that the features shown in the drawings are for purposes of illustrations, and variations, including different and/or additional features and arrangements thereof, are possible.

[0005] FIG. 1A is a partial cutaway view of an environment having a media playback system configured in accordance with aspects of the disclosed technology.

[0006] FIG. 1B is a schematic diagram of the media playback system of FIG. 1A and one or more networks.

[0007] FIG. 2A is a functional block diagram of an example playback device.

[0008] FIG. 2B is an isometric diagram of an example housing of the playback device of FIG. 2A.

[0009] FIG. 2C is a diagram of an example voice input.

[0010] FIG. 2D is a graph depicting an example sound specimen in accordance with aspects of the disclosure.

[0011] FIGS. 3A, 3B, 3C, 3D and 3E are diagrams showing example playback device configurations in accordance with aspects of the disclosure.

[0012] FIG. 4 is a functional block diagram of an example controller device in accordance with aspects of the disclosure.

[0013] FIGS. 5A and 5B are controller interfaces in accordance with aspects of the disclosure.

[0014] FIG. 6 is a message flow diagram of a media playback system.

[0015] FIG. 7A is a functional block diagram of an example network microphone device.

[0016] FIG. 7B is an isometric diagram of the example network microphone device in a first orientation.

[0017] FIG. 7C is an isometric diagram of the example network microphone device in a second orientation.

[0018] FIG. 7D is an isometric diagram illustrating the example network microphone device transitioning from the first orientation to the second orientation.

[0019] FIG. 7E is a functional block diagram of certain components of the example network microphone device in accordance with aspects of the disclosure.

[0020] FIG. 8A is a schematic diagram illustrating the example network microphone device operating in a first mode while paired with an example network device.

[0021] FIG. 8B is a schematic diagram illustrating the example network microphone device operating in a second mode while paired with the example network device.

[0022] FIG. 9 is a schematic diagram illustrating an example media playback system and cloud network in accordance with aspects of the disclosure.

[0023] FIGS. 10A, 10B, 10C, and 10D show exemplary output of an example NMD configured in accordance with aspects of the disclosure.

[0024] FIG. 11 is a flow diagram of an example method to toggle a VAS based on orientation in accordance with aspects of the disclosure.

[0025] The drawings are for purposes of illustrating example embodiments, but it should be understood that the inventions are not limited to the arrangements and instrumentality shown in the drawings. In the drawings, identical reference numbers identify at least generally similar elements. To facilitate the discussion of any particular element, the most significant digit or digits of any reference number refers to the Figure in which that element is first introduced. For example, element 103a is first introduced and discussed with reference to FIG. 1A.

DETAILED DESCRIPTION

I. Overview

[0026] Example techniques described herein involve toggling voice input processing via a cloud-based voice assistant service (“VAS”). An example network microphone device (“NMD”) may enable or disable processing of voice inputs via a cloud-based voice assistant service based on the physical orientation of the NMD. While processing of voice inputs via the cloud-based VAS is disabled, the NMD may process voice inputs via a local natural language unit (NLU).

[0027] An NMD is a networked computing device that typically includes an arrangement of microphones, such as a microphone array, that is configured to detect sound present in the NMD’s environment. NMDs may facilitate voice control of smart home devices, such as wireless audio playback devices, illumination devices, appliances, and home-automation devices (e.g., thermostats, door locks, etc.). NMDs may also be used to query a cloud-based VAS for information such as search queries, news, weather, and the like.

[0028] Some users are apprehensive of sending their voice data to a cloud-based VAS for privacy reasons. One possible advantage of a processing voice inputs via a local NLU is